

## Two new synonyms in the genus *Pityrodia* (Lamiaceae subfamily Chloanthoideae)

In a revision of the genus *Pityrodia* R. Br. (Lamiaceae subfamily Chloanthoideae) by Munir (1979), the following five new names were published for taxa that occur in Western Australia: *Pityrodia augustensis* Munir, *P. chorisepala*, *P. glabra*, *P. glutinosa* and *P. ovata*. All of Munir's descriptions of these new taxa were based on very limited material. Subsequent collections have increased the number of specimens available for study, providing a much better basis for assessing the morphological variation and taxonomic status of these taxa. Since they are still known from relatively few collections, all of these taxa currently have conservation priority.

During identification of material for a flora survey of the Shark Bay area (Trudgen & Keighery 1995), it was discovered that *Pityrodia glabra* and *P. glutinosa* are synonymous. A recent examination of herbarium material from the northern arid zone of Western Australia has shown that *P. chorisepala* and *P. ovata* are also synonymous. In each case the two names were published simultaneously, so neither has priority. This paper reduces *P. glabra* and *P. ovata* to synonymy.

Recent collections of *Pityrodia augustensis* have confirmed that it is a very morphologically distinct species with an extremely restricted range. This species has been adequately surveyed and is now classed as Declared Rare.

### Taxonomy

***Pityrodia chorisepala*** Munir (Munir 1979: 63–65). *Type*: South of Mongrel Downs Station, Northern Territory, 4 August 1976, *P.K. Latz* 6543 (*holo*: AD, *n.v.*, illustration seen; *iso*: see notes below, *n.v.*).

*Pityrodia ovata* Munir (Munir 1979: 118–120). *Type*: 10 miles [16 km] west of McLarty Hill oil camp, Western Australia, 4 July 1968, *J.S. Beard* 5686 (*holo*: PERTH 00999733; *iso*: PERTH 00999741).

*Illustrations*. The holotype of *Pityrodia chorisepala* is illustrated in Figure 19 and the holotype of its synonym *P. ovata* in Figure 37 of Munir (1979).

*Other specimens examined* (all PERTH). WESTERN AUSTRALIA: Site 2 (18° 55' S, 123° 14' E), near Edgar Range, 9 Aug. 1976, *K.F. Kenneally* 5560; Site 1 (18° 53' S, 123° 43' E), near Edgar Range, 12 Aug. 1976, *K.F. Kenneally* 5606.

NORTHERN TERRITORY: 12 miles [19 km] W of Sandy Blight Junction, 26 July 1967, *A.S. George* 8921.

*Distribution*. Occurs in the far south of the Northern Botanical Province and in the north of the Eremean Botanical Province of Western Australia, extending c. 600 km from near Edgar Range east to the Western Australian border, and also extending slightly into Northern Territory.

*Habitat*. Recorded in red sand, on dunes or spinifex plains, with one record (*J.S. Beard* 5686) of the habitat as 'tree steppe'.

*Phenology.* Flowers and fruits recorded July to August.

*Conservation status.* CALM Conservation Codes for Western Australian Flora: Priority Two. Known from three localities in Western Australia and two in Northern Territory. This species has a fairly wide range of over 600 km in a remote area where there is little botanical collecting, so may occur at many more locations than are presently known. It was reported to be rare at one of the Northern Territory locations but there is no indication of population size for any of the Western Australian specimens.

*Notes.* Isotypes of *Pityrodia chorisepala* are cited (Munir 1979: 63) for AD, CANB, NT and PERTH but no specimen has been lodged in the type collection at PERTH to date. Munir based his description of *Pityrodia chorisepala* on two specimens from Northern Territory and that of *P. ovata* on a single collection from Western Australia. Two additional specimens collected from west and east of Edgar Range were seen later by Munir, who annotated the western one as *P. chorisepala* and the eastern one as *P. ovata* in 1980. It was evident from these extra collections that both taxa occurred in Western Australia and that their geographic ranges overlapped.

Munir (1979: 120) indicated that *Pityrodia ovata* was very similar to *P. chorisepala* but differed in "its leaves being honey-combed underneath, not contracted at the base, covered all over with short gland-tipped hairs; leaves and inflorescence lax, not crowded towards the apex; pedicel short,  $\pm$  1 mm long; calyx-lobes obtuse with rounded tip". The only consistent difference found in the current study was that all the leaves of specimens annotated by Munir as *P. ovata* have an indumentum predominantly of short simple glandular hairs, with non-glandular dendritic hairs restricted to the veins and margins, whereas in specimens annotated as *P. chorisepala* only the upper 'floral' leaves have this type of indumentum and the lower leaves are densely covered throughout by non-glandular dendritic hairs. Consequently the leaves of *P. ovata* specimens tend to show the veins more clearly on the undersurface. Both groups of specimens have leaves contracted at the base into a very short petiole, both have the calyx lobes varying from obtuse to acute, and there is no difference between them in the degree of laxity of the leaves and inflorescences. The single character difference of leaf indumentum is not sufficient to maintain the two taxa as distinct species.

*Pityrodia chorisepala* is chosen here, in preference to *P. ovata* as the name for this species, partly because it has been more widely used and partly because it appears to be a more suitable name. One of the specimens (*K.F. Kenneally* 5560) has the leaves mostly obovate rather than ovate, so use of the epithet *ovata* could be misleading.

Although the corolla appears glabrous outside, all specimens have a few minute simple glandular hairs on the lobes. Flower colour is recorded for one of the specimens (*K.F. Kenneally* 5560) as "white with red spots in throat", while two other records only mention the white colour.

***Pityrodia glutinosa*** Munir (Munir 1979: 84–86). *Type:* About 175 km north of Geraldton, Western Australia, 2 October 1966, *E.A. Shaw* 608 (*holo:* AD, *n.v.*, illustration seen; *iso:* PERTH 01608320).

*Pityrodia glabra* Munir (Munir 1979: 51–54). *Type:* 7 miles [11 km] along Tamala road from Hamelin–Denham road, Western Australia, 26 August 1969, *A.S. George* 9561 (*holo:* PERTH 00999725; *iso:* AD, *n.v.*).

*Illustrations.* The holotype of *Pityrodia glutinosa* is illustrated in Figure 26 and a specimen of its synonym *P. glabra* in Figure 15 of Munir (1979).

*Otherspecimens examined* (all PERTH). WESTERN AUSTRALIA: 200 m up track to N of Useless Loop road, 8.7 km W of Denham–Hamelin road, 22 Aug. 1991, A.H. Burbidge 4636; SE of Coolcalalaya Station, beside State Barrier Fence, 18.5 km SE of gas pipeline, 28 Aug. 1990, A.H. Burbidge 4791; c. 50 miles [80 km] N of Mary Springs Homestead, North West Coastal Highway, 14 Sep. 1960, S. Davies; 8 km on Tamala road, 28 Aug. 1985, H. Demarz 10685; 39 km N of Murchison bridge, 7 Aug. 1987, H. Demarz 11754; 135 km N of Northampton, 14 July 1964, D.W. Goodall 1195; c. 30 km NW of Tamala homestead, 20 July 1988, G.J. Keighery & J.J. Alford 2007; 8.8 km W along Useless Loop road from Denham–Hamelin road, 23 Aug. 1994, G.J. Keighery & N. Gibson 1273; 425 mile peg on North West Coastal Highway [182 km N of Geraldton], 3 Nov. 1965, F. Lullfitz 4331; 436 miles on North West Coastal Highway [200 km N of Geraldton], 2 Oct. 1966, E.M. Scrymgeour 1476.

*Distribution.* Occurs in the far north of the South West Botanical Province of Western Australia, extending from Nanga Station south-east to west of Lake Nerramayne Station.

*Habitat.* *Pityrodia glutinosa* occurs in a shrub layer often dominated by a *Eucalyptus* mallee woodland or sometimes by *Calothamnus*. The northern populations, from Nanga Station, are from red sandy soil over limestone, in a habitat known as the Tamala System (Beard 1976), while the southernmost population near Lake Nerramayne Station is recorded on a slightly elevated flat with orange sand. No habitat details are recorded for the intermediate populations except for one specimen collected from a sand dune.

*Phenology.* Flowers and fruits recorded July to November.

*Conservation status.* CALM Conservation Codes for Western Australian Flora: Priority Three. Known from at least eight localities over a range of c. 190 km, but not from any conservation reserves.

*Notes.* Although *Pityrodia glabra* and *P. glutinosa* were named in the same publication, no direct comparison was made between them except in the key, where they were separated at couplet 28 on the basis of leaf characters, the leaves described as “sessile, entire, slightly recurved along the distal margins” for *P. glutinosa* and “subsessile, distally dentate, flat” for *P. glabra* (Munir 1979: 9). In the illustration (Figure 26) provided for *P. glutinosa*, the leaves appear to be subsessile and dentate, although not as prominently dentate as some of the leaves illustrated (Figure 15) for *P. glabra*. An examination of the herbarium specimens has revealed that the mature leaves are shortly petiolate and dentate in both taxa and the degree to which the margins are recurved depends partly on how well the specimens have been pressed.

*Pityrodia glutinosa* is chosen here as the name to use for this species, rather than *P. glabra*, because it has been applied to the majority of the specimens and because the epithet *glutinosa* is more accurately descriptive for the taxon than is the epithet *glabra*.

### References

- Beard, J.S. (1976). "The Vegetation of the Shark Bay and Edel Area." (Vegmap Publications: Perth.)
- Munir, A.A. (1979). A taxonomic revision of the genus *Pityrodia* (Chloanthaceae). *Journal of the Adelaide Botanic Gardens* 2: 1-138.
- Trudgen, M.E. & Keighery, G.J. (1995). Flora of the Shark Bay World Heritage Area and environs. Unpublished Report for the Australian Heritage Commission.

#### **B.L. Rye**

Western Australian Herbarium, Department of Conservation and Land Management, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

#### **M.E. Trudgen**

C/- Western Australian Herbarium, Department of Conservation and Land Management, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983